PDR RID Report

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Review FOS
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Section NA **Page** NA **Figure Table** NA

Category Name Design **Actionee** HAIS

Sub Category

Subject FDIR Analysis

Description of Problem or Suggestion:

The presentations stated FDIR availability numbers but the design did not show that the numbers could be met. Given the multiple spacecraft configuration and operational processes in the future the design is in question if the single failure tolerance of the FDDI topology will meet the EOS needs. It would be difficult to meet the 1 minute board level restore change out unless the system has full on line diagnostic capability. This capability was not discussed.

Originator's Recommendation

Evaluate the current design in meeting FDIR requirements. Also the design needs to be assessed if it will meet multiple spacecraft operational requirements.

GSFC Response by: **GSFC Response Date**

HAIS Response by: D. Herring **HAIS Schedule** 1/13/95

HAIS R. E. A. Miller **HAIS Response Date** 1/24/95

The RMA analysis was predicated on addressing the following Level 3 requirement for FOS: "The ECS shall have no single point of failure for functions associated with real-time operations of the spacecraft and instruments". The architecture and the string of equipment pertaining to the FOS fulfills this requirement as well as the availability requirement of 0.9998.

This architecture and design can be extended to fulfill multiple spacecraft operational requirements as well based on addressing the 'no single point of failure' requirement. While addressing multiple failures is currently beyond the scope of the FOS, operational workarounds can be employed in the case where multiple, concurrent network failures occur (e.g., support LAN can be used operationally, etc.).

Reference section 5.1 in DID 515, Availability Models/Predictions for a full description of the FOS RMA Analysis. Note that this document will be delivered per the CDRL in March1995.

Status **Closed** **Date Closed** **2/1/95** **Sponsor** **Johns**

****** **Attachment if any** ******